

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Hour: \_\_\_\_\_

## Questions, Variables, and Hypothesis Practice

Read each scenario below. For each scenario: 1) write a GOOD science question; 2) identify the independent variable and dependent variable; 3) write a hypothesis for the scenario using the if...then... format

Two 10<sup>th</sup> grade students wanted to know the effect of shoe brand on speed. They took 2 brands of track shoes (Nike and Adidas) and measured 50-yard dash times in each brand of shoe. They thought that the Nike shoes would be faster. They compared the dash times to see which shoe resulted in the lowest sprint times.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis:

Laura loved to chew gum- and she especially liked to blow bubbles. She wondered if the type of sweetener (real sugar or artificial sweetener) affected the size of the bubble. She assumed that they would be the same size. Laura got a pack of regular gum and a pack of sugar-free gum and chewed each. She blew the largest possible bubbles for each type of gum- then she measured the size of the bubbles to see if the sweetener type made a difference.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis:

Amanda had trouble finishing her homework. She'd sit at her desk in her bedroom and stare at her book, but her mind would wander and she couldn't finish her work. She wondered if she would finish if she turned off all of the distractions around her. She got her homework together and turned off the TV and all of the other things in her room that made noise- making her room silent. She predicted that eliminating "background noise" would help her finish more homework problems.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis:

Ryan got grounded by his parents because he had a D in science class. He wondered if moving his seat to the front of the class would help him pay attention and receive higher scores on assignments.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis:

Bob loved to eat microwavable popcorn. One day he was looking over the different brands of microwavable popcorn when he noticed the prices. He came to the conclusion that there were two kinds of popping corn- bargain popcorn and gourmet popping corn. The box for the gourmet popping corn advertised that it would have fewer un-popped kernels than bargain brands. He bought a box of "Fred's Bargain Popcorn" which Bob normally ate, and "Big Betty's Gourmet Popcorn" which was the most expensive popcorn in the store. He took them home and popped both bags in the oven as directed. He emptied the bags one at a time and separated the popped and unpopped kernels.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis:

Sam wondered if eliminating all carbohydrates from his diet would help him lose weight. He weighed himself on Monday, then ate no food high in carbs for 7 days. He re-weighed himself the following Monday. The next week he ate foods high in carbs at every meal for 7 days. He re-weighed himself the following Monday.

1. Science Question:

2. Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

3. Hypothesis: